

**FIELD SAMPLING PLAN
FOR THE
JOHN R STREET
SITE ASSESSMENT
HIGHLAND PARK, WAYNE COUNTY, MICHIGAN**

Prepared for
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Prepared by
WESTON SOLUTIONS, INC.
Region V Superfund Technical Assessment and Response Team

October 21, 2010

Approved by: _____ Date: _____

U.S. EPA Region V
On-Scene Coordinator

Project Dates of Sampling:	October 25, 2010
CERCLA Site/Spill Identifier No.:	B5YF
Contractor Organization:	Weston Solutions, Inc.
Contract Name:	START III
Contract No.:	EP-S5-06-04
Technical Direction Document No.:	S05-0001-1007-013
Document Control No.:	1137-4H-AIJL

ACRONYM LIST

ACM	Asbestos Containing Material
CFR	Code of Federal Regulations
COC	Chain-of-Custody
FSP	Field Sampling Plan
MS/MSD	Matrix Spike/ Matrix Spike Duplicate
OSC	On-Scene Coordinator
PCB	Polychlorinated biphenyl
pH	Corrosivity
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
START	Superfund Technical Assessment and Response Team
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedures
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
WESTON	Weston Solutions, Inc.

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1.0 Introduction

This Field Sampling Plan (FSP) identifies the data collection activities and associated quality assurance/quality control (QA/QC) measures specific to the John R Street Site (the Site) located at 19159 John R Street, in Highland Park, Wayne County, Michigan (**Figure 1**). All data will be generated in accordance with the quality requirements described in the *Superfund Technical Assessment and Response Team (START) III Generic Quality Assurance Project Plan (QAPP)*, dated June 2006. The purpose of this FSP is to describe site-specific tasks that will be performed in support of the stated objectives. The FSP will reference back to the QAPP for generic tasks common to all data collection activities including routine procedures for sampling and analysis, sample documentation, equipment decontamination, sample handling, data management, assessment and data review. Additional site-specific procedures and/or modifications to procedures described in the *START III Generic QAPP* are described in the following FSP elements.

This FSP is prepared, reviewed, and approved in accordance with the procedures detailed in the *START III Generic QAPP*. Any deviations or modifications to the approved FSP will be documented using **Table 1: FSP Revision Form**.

2.0 Project Management and FSP Distribution and Project Team Member List

Management of the Site will be as documented in the *START III Generic QAPP*. Refer to the *START III Generic QAPP* for an organizational chart, communication pathways, personnel responsibilities and qualifications, and special personnel training requirements.

The following personnel will be involved in planning and/or technical activities performed for this data collection activity. Each will receive a copy of the approved FSP. A copy of the FSP will also be retained in the Site file.

Personnel	Title	Organization	Phone Number	Email
Jon Gulch	OSC	U.S. EPA	734-740-9017	gulch.john@epa.gov
Lori Kozel	Project Manager	START	248-658-5012	Lori.Kozel@WestonSolutions.com
Mike Browning	Field Personnel	START	248-259-4761	Mbrowning@dynamac.com
Tonya Balla	Health and Safety	START	847-918-4094	t.balla@westonsolutions.com
Lisa Graczyk	QA Reviewer	START	312-424-3339	lgraczyk@dynamac.com

NOTES:

OSC – On-Scene Coordinator

QA – Quality Assurance

START – Superfund Technical Assessment and Response Team

U.S. EPA – United States Environmental Protection Agency

3.0 Planning and Problem Definition

3.1 Problem Definition

The property located at 19159 John R Street is a former warehouse facility. United States Environmental Protection Agency (U.S. EPA) identified the following concerns at the Site during a survey of the property:

- Deteriorated building conditions (collapsed roof and walls and broken windows),
- Asphalt and concrete pavement, overgrown vegetation, and bare soil surrounding the building,
- Storm sewer drains were observed along John R Street,
- Access into the building and onto the property south of the building is unrestricted from the west parking lot,
- Access onto the property north of the building is unrestricted due to lack of fencing around the entire property,
- Signs of trespassing and vandalism (active metal scrapping, burned areas, broken windows, and trash),
- Trash and various bulk items outside of the building,
- Large piles of old tires north and south of the building,
- Piles of dirt and partially buried debris north of the building,
- Pile of unknown solid material (white) south of the building,
- Burned vehicles inside the building,
- Solid material (appears to be metal and rust from the metal ceiling) on the floor inside the building,
- Potential asbestos containing material (ACM) inside the building (roofing material and ceiling tile)
- No signs of aboveground storage tanks or underground storage tanks, and
- Several physical hazards (collapsed and fire-damaged roof and walls and piles of trash, debris, and tires).

U.S. EPA will conduct a site assessment to investigate the conditions onsite that could pose an imminent threat to human health, welfare, and the environment.

3.2 Site History and Background

Past operations on the property are currently unknown. The property is bordered to the north by a vacant lot, small building, and abandoned coal transfer station; to the south by commercial properties; to the east by John R Street and commercial properties; and to the West by Derby Street, residential properties, and commercial properties. The property contains one building surrounded by overgrown vegetation and bare soil (**Figure 2**). A parking lot for the former facility is located west of the property. A chain link fence surrounds the southern portion of the property from the building's south wall to the southern property boundary.

3.3 Contaminants of Concern/Target Analytes

The primary chemicals of concern associated with the property are heavy metals in the piles of unknown materials and asbestos in the suspect building materials. Planned sampling/monitoring activities will include the following: sampling piles of unknown materials, sampling suspect ACM and sampling any liquids found. In order to characterize the contamination that exists at the site, laboratory analyses will be performed on the following samples:

Up to three solid/sludge samples and up to three liquid samples will be collected and submitted for the following analyses:

- Target Analyte List (TAL) metals,
- Target Compound List (TCL) Volatile Organic Compounds (VOC),
- TCL Semi-volatile Organic Compounds (SVOC),
- Toxicity Characteristic Leaching Procedure (TCLP) metals (sludge and solids),
- TCLP VOCs (sludge and solids),
- TCLP SVOCs, (sludge and solids),
- Corrosivity (pH),
- Ignitibility, and
- Total Polychlorinated Biphenyl's (PCB).

Additionally, up to four samples of building materials will be sampled and analyzed for asbestos content.

4.0 Project Description and Schedule

The site assessment will consist of a perimeter site and building walk through and sample collection. The following are the anticipated samples to be collected:

- Up to six samples (liquid, or solid) depending on observations made during the site reconnaissance.
- Up to four building material samples.

START will have two personnel performing the site assessment activities. The site assessment is planned for October 25, 2010. Section 6 contains a more detailed site assessment design.

A Weston Solutions, Inc. (WESTON®)-procured subcontracted laboratory will be utilized for conducting the sample analyses. The turnaround time for the preliminary sample data will be 7 calendar days. The sampling results will be reviewed and validated by a START chemist within 2 weeks following the receipt of the full data package.

5.0 Project Quality Objectives

5.1 Project Objectives

The objective of sampling activities is to determine if the materials stored on the Site or the Site conditions pose a threat to human health and the environment.

The objectives for this investigation include:

- Identifying the constituents and/or characteristic properties of the materials present in containers and building materials at the Site;
- Determining if the soil along the main building's east exterior is contaminated;
- Determining if a removal action is warranted based on the hazardous waste characteristics presented in 40 Code of Federal Regulations (CFR), Part 261 Subpart C and, if so, whether the response should be classified as emergency, time-critical, or non-time critical; and,
- Rapidly assess and evaluate the urgency, magnitude, extent, and effects of a release, or threatened release, of hazardous substances, pollutants or contaminants identified and their affects on human health and/or the environment.

5.2 Measurement and Performance Criteria

Generic measurement and performance criteria described in the *START III Generic QAPP* will be used to ensure that data are sufficiently sensitive, precise, accurate, and representative to support site decisions.

5.3 Data Quality Objectives

Data quality objectives address requirements that include when, where, and how to collect samples, the number of samples, and the limits on tolerable error rates. These steps should periodically be revisited as new information about a problem is learned. Sections 4.0 and 6.0 address these objectives.

In addition, data quality objectives address the analytical screening levels to be used when making decisions. The waste sampling results will be compared to the hazardous waste criteria outlined in 40 CFR, Part 261 Subpart C and 40 CFR Part 761 to determine whether an emergency response is needed pursuant to 40 CFR Part 300.

6.0 Sampling Design

WESTON START will perform the Site activities detailed in the following subsections.

6.1 Site Reconnaissance

A site walk will be conducted. The walk-through will consist of the following activities:

- Air monitoring with a MultiRAE and Micro-R radiation meter;
- Documentation of the number of containers, location, approximate size, type, condition, contents, and approximate volume of contents;
- Documentation of any other storage containers;
- Written and photographic documentation of Site conditions; and,
- Site mapping.

6.2 Sampling

WESTON START will collect samples from containers at the Site that appear to contain hazardous materials. The locations of the samples will be determined following the site and building walk through. The collection of each sample type is described below.

- **Liquid Waste Sampling.** Liquid waste samples will be collected from any buckets, totes, and miscellaneous containers located at the Site. The sample locations will be marked clearly with the sample name using a grease pen or spray paint. Containers will be opened with non-sparking tools for this task. Liquid waste sample collection will be accomplished with the use of drum thieves, disposable bailers, or jars. The liquids will be screened with a MultiRAE and pH paper. Sample containers will be filled directly from the drum thief or bailer. The liquid will be collected and analyzed for TAL metals, TCL VOCs, TCL SVOCs, ignitability, pH, and total PCBs.
- **Solid/Sludge Waste Sampling.** Solid/sludge waste samples will be collected from any buckets, totes, and miscellaneous containers located at the Site. The sample locations

will be marked clearly with the sample name using a grease pen, spray paint, or a pin-flag. Containers will be opened with non-sparking tools for this task. Solid waste sample collection will be accomplished with the use of a disposable scoop. Solids will be screened with a MultiRAE. If the solid waste is easily accessible, it will be scraped into a pile and spooned directly into sampling containers. The solid/sludge samples will be collected and analyzed for TAL metals, TCL VOCs, TCL SVOCs, TCLP metals, TCLP VOCs, TCLP SVOCs, ignitibility, pH, and total PCBs.

- **Asbestos Bulk Samples** collected from the structure(s) will be collected in accordance with 40 CFR 763.86 “Sampling”. Suspect ACM will be segregated into homogenous areas and designated as Surfacing, Thermal Systems Insulation or Miscellaneous materials.

The sample container, volume, and preservation requirements are presented in **Table 2: Sampling and Analysis Summary**.

6.2 Sample Numbering System

All samples for analysis, including QC samples, will be given a unique sample number. The sample numbers will be recorded in the field logbook, the chain-of-custody (COC) paperwork, and the shipment documents.

WESTON START will assign each sample its own unique number. The sample number highlights the suspected contaminated area and location, and will be used for documentation purposes in the field logbook, as well as for the presentation of the analytical data in memoranda and reports.

The project samples will be identified using the following format:

JR-MATRIX-XX-mmddyy

JR	indicates that the sample is from the John R Street Site Assessment
MATRIX	indicates which matrix is being sampled. A “WL” will be used for waste liquid samples, while a “WS” will be used for waste solid/sludge samples. A “ACM” will be used for potential asbestos containing material samples.
XX	indicates the sequential order of the sample location
mmddyy	indicates the sampling date

In addition, each field duplicate sample will be identified with the sequential number that follows each duplicate’s original sample. START will state in the logbook which samples are duplicate samples. This procedure will enable START to track which samples are duplicates, while keeping the laboratory from knowing which samples are duplicates.

Examples of the sample identifications for the Site are as follows:

- JR-WL01-102510: Liquid waste sample number 1, collected on October 25, 2010.
- JR-WL02-102510: (if considered a duplicate of Sample JRS-WL02-102510): Liquid waste sample number 2, collected on October 25, 2010. START will note in the logbook that this sample is actually a duplicate of Sample JRS-WL01-102510.

6.3 Management of Investigation-Derived Wastes

For the purposes of this FSP, investigation-derived wastes are defined as any byproduct of the field activities that is suspected or known to be contaminated with hazardous substances. The performance of field activities will produce spent Personal Protective Equipment (PPE) and potentially decontamination water. All waste generated during the site assessment will be left on site in a staging area with U.S. EPA approval. If required, disposal arrangements will be executed in accordance with appropriate local, state, or federal regulations. START will refer to the U.S. EPA's *Management of Investigation-Derived Wastes During Site Inspections* (U.S. EPA, 1991) guidance on off-site disposal policies, if this action is deemed necessary.

7.0 Sampling Procedures

7.1 Sampling Standard Operating Procedures

The sampling procedures to be used for this site investigation are detailed in Section 6.

7.2 Decontamination Procedures

General decontamination procedures are described in Section B.2 of the *START III Generic QAPP*. Specifically, all disposable sampling supplies and PPE will be bagged and staged on site in an area specified by the U.S. EPA.

8.0 Sample Handling, Tracking, and Custody Procedures

All samples will be identified, handled, shipped, tracked, and maintained under COC, in accordance with *START III Generic QAPP* Section B.3.

9.0 Field Analytical Methods and Procedures

9.1 Field Analytical Methods and Standard Operating Procedures

Field analytical methods will not be employed during the site assessment. All analytical methods will be performed by a commercial laboratory and are presented in Table 2 of this report.

9.2 Field Testing Laboratory

A field testing laboratory will not be used during the site assessment.

9.3 Screening/Confirmatory Analyses

The liquid and solid/sludge containers will be screened with the MultiRAE and Micro-R radiation meter, and may be field tested with pH paper.

10.0 Fixed Laboratory Analytical Methods and Procedures

A U.S. EPA-certified commercial laboratory will be used. The laboratory name, address, contact person, telephone number, and fax number are as follows:

Brighton Analytical, LLC
2105 Pless Drive
Brighton, MI 48114

The laboratory analytical methods and procedures are detailed in **Table 2: Sampling and Analysis Summary** of this FSP.

11.0 Quality Control Activities

11.1 Field Quality Control

Field QC samples will be collected and analyzed for this project at the frequency described in Table 4 of the *START III Generic QAPP*. The number of QC samples collected for each analytical parameter and concentration level are listed in **Table 2: Sampling and Analysis Summary**.

11.2 Analytical Quality Control

QC for analytical procedures will be performed at the frequency described in Tables 5 and 6 of the *START III Generic QAPP*. In addition, method-specific QC requirements will be used to ensure data quality.

11.3 Performance Evaluation Samples

Performance Evaluation Samples will not be collected during this sampling event.

12.0 Documentation, Records, and Data Management

Documentation, record keeping, and data management activities will be conducted in accordance with the *START III Generic QAPP*, Section B.10.

13.0 Quality Assurance Assessment and Corrective Actions

No field audits will be conducted due to the short-term (one day) sampling activity.

14.0 Reports to Management

Reports to management will be written and distributed in accordance with Section C of the *START III Generic QAPP*.

15.0 Steps 1, 2 and 3: Data Review Requirements and Procedures

Step 1: Data collection activities, including sample collection and data generation, will be verified in accordance with Section D of the *START III Generic QAPP*.

Step 2: Data will be validated in accordance with Section D of the *START III Generic QAPP*. A WESTON START chemist will validate the data.

Step 3: Data will be reviewed for usability in accordance with Section D of the *START III Generic QAPP*.

TABLES

Table 1 **FSP Revision Form**

Site: John R Street Site Assessment, Highland Park, Wayne County, Michigan

OSC: Jon Gulch

TDD: S05-0001-1007-013

Date	Rev. No.	Proposed Change to FSP/QAPP	Reason for Change of Scope/Procedures	SAP Section Superseded	Requested By	Approved By

Table 2
Sampling and Analysis Summary

Site: John R Street Site Assessment, Highland Park, Wayne County, Michigan

OSC: John Gulch

TDD: S05-0001-1007-013

Matrix	Analytical Parameter	Analytical Method	Holding Time	Containers (Numbers, Size, and Type)	Preservation Requirements	Number of Sampling Locations	Number of Field Duplicates	Number of MS/MSDs ²	Number of Blanks (Trip, Field, Equip. Rinsate) ¹	Total Number of Samples to Lab ³
Building Material	Asbestos	U.S. EPA Method 600/R-93/116 (PLM)	NA	1 32oz wide mouth glass	None		1 per 10 samples collected	NA	NA	4
Waste Liquid	TAL Metals	U.S. EPA Method 6010	180 days	1 32oz wide mouth glass	Ice to 4°C	Up to 3	1	0	0	3
	TCL VOCs	U.S. EPA Method 8260B	14 days to extract, 40 days to analyze							
	TCL SVOCs	U.S. EPA Method 8270C	14 days to extract, 40 days to analyze							
	pH	U.S. EPA Method 9040/9045D	ASAP							
	Ignitability	U.S. EPA Method 1010/1020	7 days							
Solid	PCB	U.S. EPA Method 8082	14 days to extract 40 days to analyze	1 8oz. glass jar	Ice to 4°C	Up to 3	1	0	0	3
	TAL Metals	U.S. EPA Method 6010	180 days							
	TCL VOCs	U.S. EPA Method 8260B	14 days to extract 40 days to analyze							
	TCL SVOCs	U.S. EPA Method 8270C	14 days to extract 40 days to analyze							

Matrix	Analytical Parameter	Analytical Method	Holding Time	Containers (Numbers, Size, and Type)	Preservation Requirements	Number of Sampling Locations	Number of Field Duplicates	Number of MS/MSDs ²	Number of Blanks (Trip, Field, Equip. Rinsate) ¹	Total Number of Samples to Lab ³
	TCLP Metals	U.S. EPA Method 1311/6010B/7470A	14 days to TCLP extraction plus 14 days to analysis							
	TCLP VOCs	U.S. EPA Method 1311/8260B	14 days to TCLP extraction plus 14 days to analysis							
	TCLP SVOCs	U.S. EPA Method 1311/8270C	14 days to TCLP extraction plus 14 days to analysis							
	pH	U.S. EPA Method 9040/9045D	ASAP							
	Ignitability	U.S. EPA Method 1010/1020	7 days							
	Total PCBs	U.S. EPA Method 8082	14 days to extract 40 days to analyze							

Notes:

¹ Total number of samples to the laboratory does not include MS/MSD samples.

MS/MSD – Matrix spike/ matrix spike duplicate

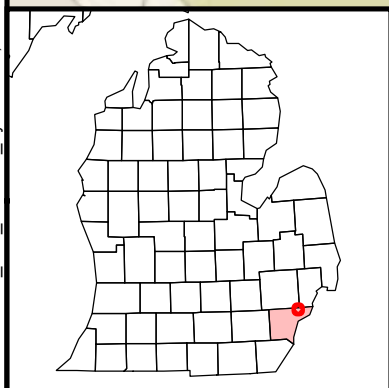
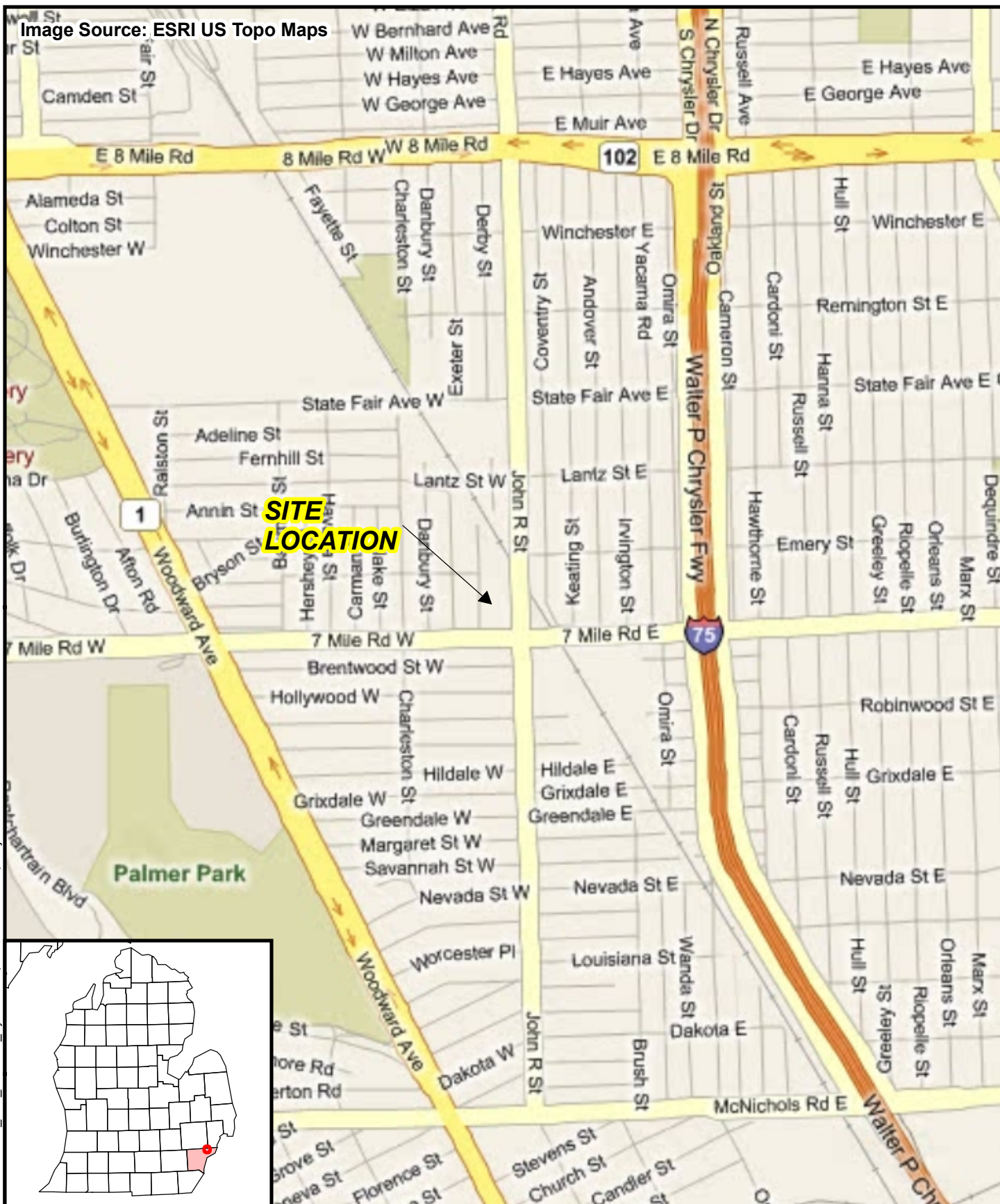
PCB – Polychlorinated Biphenyl

TCLP – Toxicity Characteristic Leaching Procedure

TCL – Target Compound List

FIGURES

Image Source: ESRI US Topo Maps



Legend

0 2,000 Feet



Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1007-013
DCN: 1137-4H-AIJL



Prepared By:
WESTON SOLUTIONS, INC

360 EAST MAPLE ROAD
SUITE R
TROY, MICHIGAN 48063

Figure 1
Site Location Map
John R Street Site
Highland Park, Wayne County, Michigan

Image Source: ESRI Bing Maps

**SITE
LOCATION**

File: D:\John_R_Street.mxd\F2_Site_Features_zoomin.mxd, 21-Oct-10 14:19, mejaom

Legend

0 100
Feet



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Prepared By:
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SOLUTIONS, INC**

360 EAST MAPLE ROAD
SUITE R
TROY, MICHIGAN 48083

Figure 2
Site Features Map
John R Street Site
Highland Park, Wayne County, Michigan